UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF POLICY,
ECONOMICS, AND INNOVATION

EPA -SAB- EEC-CO M -01-001

Dr. Morton Lippmann, Interim Chair
Science Advisory Board

Dr. Hillary Inyang, Chair
Environmental Engineering Committee
Science Advisory Board

Dr. Roger Kasperson, Chair
Subcommittee on the Diffusion and Adoption of Innovations
Science Advisory Board

Dear Dr. Lippman and Colleagues:

Thank you for the Science Advisory Board Commentary Resulting from a Workshop on the Diffusion and Adoption of Innovations in Environmental Protection, EPA-SAB-EEC-COM- 01-001. My staff and I enjoyed participating in the meeting and found the Commentary useful in providing broader insights into this dynamic field of innovation diffusion.

We have coordinated our review of the Commentary with the other two EPA Offices - the Office of Water and the Office of Pollution Prevention and Toxics -that participated in the workshop. In addition to our comments, they will provide comments to you also.

We found many of your suggestions in the Commentary intriguing. The idea of creating a diffusion process model, for example, is something we have discussed internally for some time. Dr. Sim Sitkin's advice to "give attention to the characteristics of the organizations, we are trying to affect and ask 'how fertile is the ground for innovation?'" is particularly germane. Based on a recommendation from EPA ' s Reinvention Action Council last June, we created a partnership with the Massachusetts Department of Environmental Protection to explore with other states possible interest in adopting the Massachusetts Environmental Results Program, a sector-wide, self certification alternative to case-by-case facility permitting. Some questions that we face as this early phase of the diffusion process is unfolding, include those raised in your Commentary: "Who will be the likely early adopters, who will be the laggards? Who are the targets of the diffusion effort and what are the characteristics of their organizations and behavior that will bear upon their decision to adopt an innovation?"

Measuring the success of diffusion efforts is complicated. We agree with your suggestion that "a program to evaluate the success of particular diffusion efforts be designed not only to collect useful information for those efforts but also to provide larger insights and systematic learning on EPA's efforts to diffuse innovations generally." We agree with the wisdom "design in" evaluation rather than "adding it on" later.

In our Project XL effort, we have addressed evaluation issues in several ways - conducting an on-going analysis of XL project innovations (see our November 2000 Report *Project XL: Directory of Regulatory, Policy, and Technology Innovations, Volume* 1); examining stakeholder involvement (see our October 2000 Report *Project XL: Stakeholder Involvement Evaluation);* and preparing annual Progress Reports on each XL project. We recognize that our evaluation efforts are limited and that we need to address some of the larger questions your COMMENTARY raises: "Were measures of expected behavioral or process changes resulting from the innovation tracked and used for evaluation and assessment of success? Were models employed examining relationships among activities, environmental outcomes, and indicators/measures? Were data assembled on why the innovation was or was not adopted?"

In an effort to more systematically examine innovative approaches, my office is exploring the development of a framework for analyzing innovations. This framework is envisioned as a practitioner's tool to facilitate the process of capturing, identifying and examining the broader potential of innovative ideas. We have found that the effectiveness of a program or innovation is often assessed in terms of its chain of results: outputs and/or products; impacts that flow from these outputs; and effects reaching beyond the pilot scale. We think that such a framework could help to us develop the type of interim guidance your Commentary suggests: "If models for...measurement and evaluation are not readily available, EPA would benefit from developing some case studies evaluating the diffusion of innovations and providing the results as interim guidance."

Again, thank you and the highly qualified Subcommittee that was assembled to assist EPA in this exciting endeavor. We look forward to interacting with you and some of your colleagues again in the future.

Sincerely,

/ S /
Jay Benforado
Acting Associate Administrator

cc: Betsy Shaw, OEPI
Louise Wise, OW
Tom Murray, OPPT